

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A system for enabling components to transfer
2 data between each other, the system comprising:
3 a plurality of components including a first component having a data object
4 that implements a universal data transfer interface; and
5 a second component capable of receiving the data object and invoking the
6 universal data transfer interface to cause a data transfer session object (DTSO) to
7 be sent to the second component, and capable of providing a viewer object that
8 enables the third component to display transferred data associated with the
9 DTSO's data type, wherein the second component acts as an intermediary
10 component, which facilitates transferring of the DTSO from the first component
11 to a third component;
12 wherein the DTSO is capable of being invoked by the third component to
13 transfer data between the first component and the third component;
14 wherein the DTSO includes instructions to return data types supported by
15 the first component;
16 wherein the DTSO includes instructions that enable the first component to
17 receive asynchronous event notifications;
18 wherein the DTSO includes instructions to return device type and
19 operating status of the first ~~component;~~ component; and

20 wherein the DTSO includes instructions to enable the first component or
21 the third component to negotiate with each other to select a transfer medium to
22 use to transfer data based upon the type of ~~data; data.~~ data. and
23 ~~wherein a session associated with data transfer is leased subject to periodic~~
24 ~~renewal by the first component at an interval of time specified by an initial lease~~
25 ~~duration parameter.~~

1 2. (Cancelled)

1 3. (Previously presented) The system as set forth in claim 1 wherein the
2 third component sends a second DTSO to the first component to be used by the
3 first component for receiving data transmitted from the third component.

1 4. (Previously presented) The system as set forth in claim 1 wherein the
2 third component receives the DTSO from the first component to be used by the
3 third component for receiving data transmitted from the first component.

1 5. (Previously presented) The system as set forth in claim 1 wherein the
2 universal data transfer interface and the DTSO have source-specific object-
3 oriented mobile code that can be interpreted and performed by the first component
4 or the third component.

1 6. (Previously presented) The system as set forth in claim 1 wherein the
2 DTSO comprises instructions to enable the first component or the third
3 component to negotiate with each other to transfer data, to select a
4 communications protocol configured to transfer data between each other based
5 upon a type of data to be transferred.

1 7. (Previously presented) The system as set forth in claim 1 wherein the
2 DTSO is configured to indicate completion responsive to expiration of a data
3 transfer lease by the first component or by the third component, or responsive to
4 the first component or to the third component indicating that the data transfer has
5 completed or failed.

1 8. (Currently amended) A system for enabling components to transfer data
2 between each other, the system comprising:
3 a first component having a first data object that implements a first
4 universal data transfer interface;
5 a second component having a second data object that implements a second
6 universal data transfer interface; and
7 a third component capable of receiving the first data object and the second
8 data object, and invoking the first universal data transfer interface and the second
9 universal data transfer interface to use a data transfer session object (DTSO) to
10 transfer data between the first component and the second component when the
11 first component has data to transfer to the second component, and capable of
12 providing a viewer object that enables the third component to display transferred
13 data associated with the DTSO's data type, wherein the third component acts as
14 an intermediary component, which facilitates transferring of the DTSO from the
15 first component to the second component;
16 wherein the DTSO includes instructions to return data types supported by
17 the first component;
18 wherein the DTSO includes instructions that enable the first component to
19 receive asynchronous event notifications;
20 wherein the DTSO includes instructions to return device type and
21 operating status of the first ~~component~~; component; and

22 wherein the DTSO includes instructions to enable the first component to
23 negotiate with the second component to select a transfer medium to use to transfer
24 data based upon the type of ~~data;~~ and data.
25 ~~wherein a session associated with data transfer is leased subject to periodic~~
26 ~~renewal by the first component at an interval of time specified by an initial lease~~
27 ~~duration parameter.~~

1 9. (Previously presented) The system as set forth in claim 8 wherein the
2 third component sends the DTSO to the first component to be used by the first
3 component for receiving data transmitted from the second component.

1 10. (Previously presented) The system as set forth in claim 8 wherein the
2 third component sends the DTSO to the second component to be used by the
3 second component for receiving data transmitted from the first component.

1 11. (Previously presented) The system as set forth in claim 8 wherein the
2 DTSO is configured to indicate completion responsive to expiration of a data
3 transfer lease by the first component or the second component, or responsive to
4 the first component or the second component indicating that the data transfer has
5 completed or failed.

1 12. (Currently amended) A method for enabling a plurality of
2 components to transfer data between each other, the method comprising:
3 invoking, with a second component having a data object that implements a
4 universal data transfer interface, the universal data transfer interface of a first
5 component of a plurality of components to cause a data transfer session object
6 (DTSO) to be sent to the second component, wherein the second component acts

7 as an intermediary component and is capable of providing a viewer object that
8 enables the third component to display transferred data associated with the
9 DTSO's data type, which facilitates transferring of the DTSO from the first
10 component to a third component; and
11 invoking the DTSO with the third component to transfer data between the
12 first component and the third component when the first component has data to
13 transfer to the third component;
14 wherein the DTSO includes instructions to return data types supported by
15 the first component;
16 wherein the DTSO includes instructions that enable the first component to
17 receive asynchronous event notifications;
18 wherein the DTSO includes instructions to return device type and
19 operating status of the first component;
20 wherein the DTSO includes instructions to enable the first component or
21 the third component to negotiate with each other to select a transfer medium to
22 use to transfer data based upon the type of data; and
23 wherein a session associated with data transfer is leased subject to periodic
24 renewal by the first component at an interval of time specified by an initial lease
25 duration parameter.

1 13. (Cancelled)

1 14. (Previously presented) The method as set forth in claim 12 further
2 comprising sending a second DTSO to the first component to be used by the first
3 component for receiving data transmitted from the third component.

1 15. (Previously presented) The method as set forth in claim 12 further

2 comprising receiving the DTSO from the first component to be used by the third
3 component for receiving data transmitted from the first component.

1 16. (Previously presented) The method as set forth in claim 12 wherein the
2 universal data transfer interface and the DTSO have source-specific object-
3 oriented mobile code that can be interpreted and performed by the first component
4 or the third component.

1 17. (Previously presented) The method as set forth in claim 12 wherein the
2 DTSO comprises instructions to enable the first component or the third
3 component to negotiate with each other to transfer data, to select a
4 communications protocol configured to transfer data between each other based
5 upon a type of data to be transferred.

1 18. (Previously presented) The method as set forth in claim 12 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the third component, or
4 responsive to the first component or to the third component indicating that the
5 data transfer has completed or failed.

1 19. (Currently amended) A method for enabling components to
2 transfer data between each other, the method comprising:
3 invoking a first universal data transfer interface of a first data object
4 belonging to a first component and a second universal data transfer interface of a
5 second data object belonging to a second component when the first component
6 has data to transfer to the second component, wherein the second component acts
7 as an intermediary component and is capable of providing a viewer object that

8 enables the third component to display transferred data associated with the
9 DTSO's data type, which facilitates transferring of the DTSO from the first
10 component to a third component;
11 obtaining a data transfer session object (DTSO) from one of the invoked
12 first universal data transfer interface or the second universal data transfer
13 interface; and
14 using the DTSO to transfer data between the first component and the
15 second component;
16 wherein the DTSO includes instructions to return data types supported by
17 the first component;
18 wherein the DTSO includes instructions that enable the first component to
19 receive asynchronous event notifications;
20 wherein the DTSO includes instructions to return device type and
21 operating status of the first component;
22 wherein the DTSO includes instructions to enable the first component or
23 the third component to negotiate with each other to select a transfer medium to
24 use to transfer data based upon the type of data; and
25 wherein a session associated with data transfer is leased subject to periodic
26 renewal by the first component at an interval of time specified by an initial lease
27 duration parameter.

1 20. (Previously presented) The method as set forth in claim 19 further
2 comprising sending the DTSO to the first component to be used by the first
3 component for receiving data transmitted from the second component.

1 21. (Previously presented) The method as set forth in claim 19 further
2 comprising sending the DTSO to the second component to be used by the second

3 component for receiving data transmitted from the first component.

1 22. (Previously presented) The method as set forth in claim 19 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the third component, or
4 responsive to the first component or to the third component indicating that the
5 data transfer has completed or failed.

1 23. (Currently amended) A computer readable medium having stored
2 thereon instructions for enabling components to transfer data between each other,
3 which when executed by one or more processors, causes the processors to
4 perform:

5 invoking, with a second component, a universal data transfer interface of a
6 data object belonging to a first component of a plurality of components to cause a
7 data transfer session object (DTSO) to be sent to the second component when the
8 first component has data to transfer to a third component, wherein the second
9 component acts as an intermediary component and is capable of providing a
10 viewer object that enables the third component to display transferred data
11 associated with the DTSO's data type, which facilitates transferring of the DTSO
12 from the first component to the third component; and

13 invoking the DTSO with the at least one of the plurality of components to
14 transfer data between the first component and the third component;

15 wherein the DTSO includes instructions to return data types supported by
16 the first component;

17 wherein the DTSO includes instructions that enable the first component to
18 receive asynchronous event notifications;

19 wherein the DTSO includes instructions to return device type and
20 operating status of the first component;
21 wherein the DTSO includes instructions to enable the first component or
22 the third component to negotiate with each other to select a transfer medium to
23 use to transfer data based upon the type of data; and
24 wherein a session associated with data transfer is leased subject to periodic
25 renewal by the first component at an interval of time specified by an initial lease
26 duration parameter.

1 24. (Cancelled)

1 25. (Previously presented) The medium as set forth in claim 23 further
2 comprising sending a second DTSO to the first component to be used by the first
3 component for receiving data transmitted from the third component.

1 26. (Previously presented) The medium as set forth in claim 23 further
2 comprising receiving the DTSO from the first component to be used by the third
3 component for receiving data transmitted from the first component.

1 27. (Previously presented) The medium as set forth in claim 23 wherein
2 the universal data transfer interface and the DTSO have source-specific object-
3 oriented mobile code that can be interpreted and performed by the first component
4 or the third component.

1 28. (Previously presented) The medium as set forth in claim 23 wherein
2 the DTSO comprises instructions to enable the first component or the third
3 component to negotiate with each other to transfer data, to select a

4 communications protocol configured to transfer data between each other based
5 upon a type of data to be transferred.

1 29. (Previously presented) The medium as set forth in claim 23 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the third component, or
4 responsive to the first component or to the third component indicating that the
5 data transfer has completed or failed.

1 30. (Currently amended) A computer readable medium having stored
2 thereon instructions for enabling components to transfer data between each other,
3 which when executed by one or more processors, causes the processors to
4 perform:

5 invoking a first universal data transfer interface of a first data object
6 belonging to a first component and a second universal data transfer interface of a
7 second data object belonging to a second component when the first component
8 has data to transfer to the second component, wherein the second component acts
9 as an intermediary component, and is capable of providing a viewer object that
10 enables the third component to display transferred data associated with the
11 DTSO's data type, which facilitates transferring of the DTSO from the first
12 component to a third component;

13 obtaining a data transfer session object (DTSO) from one of the invoked
14 first universal data transfer interface or the second universal data transfer
15 interface; and

16 using the DTSO to transfer data between the first component and the
17 second component;

18 wherein the DTSO includes instructions to return data types supported by
19 the first component;
20 wherein the DTSO includes instructions that enable the first component to
21 receive asynchronous event notifications;
22 wherein the DTSO includes instructions to return device type and
23 operating status of the first component;
24 wherein the DTSO includes instructions to enable the first component or
25 the third component to negotiate with each other to select a transfer medium to
26 use to transfer data based upon the type of data; and
27 wherein a session associated with data transfer is leased subject to periodic
28 renewal by the first component at an interval of time specified by an initial lease
29 duration parameter.

1 31. (Previously presented) The medium as set forth in claim 30 further
2 comprising sending the DTSO to the first component to be used by the first
3 component for receiving data transmitted from the second component.

1 32. (Previously presented) The medium as set forth in claim 30 further
2 comprising sending the DTSO to the second component to be used by the second
3 component for receiving data transmitted from the first component.

1 33. (Previously presented) The medium as set forth in claim 30 further
2 comprising configuring the DTSO to indicate completion responsive to expiration
3 of a data transfer lease by the first component or by the third component, or
4 responsive to the first component or to the third component indicating that the
5 data transfer has completed or failed.